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Effects of herbal growth promoter (Orex) on performance and immune responses of broiler chickens

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Abstract

This study was undertaken to evaluate the effects of herbal growth promoter Orex on performance, immune responses and intestinal microbial population of broiler chickens. The Orex solution was a combination of alcoholic extract of rosemary (*Rosmarinus officinalis*), mugwort (*Artemisia vulgaris*) colt's foot (*Tussilago farfara*), cherry blossom (*Prunus yedoensis*) and brown algae (*Sargassum sp.*). In this experiment, a total of six hundred day-old as-hatched Ross 308 broiler chickens were used in a completely randomized design with 4 treatments, 5 replicates and 30 birds in each replicate. The experimental treatments included 1) group received drinking water without additive (control), 2) group received drinking water containing Orex (1:30, v/v), 3) group received drinking water containing Orex (1:60, v/v), and 4) group received drinking water containing commercial herbal solution (Bioherbal, 1:1000, v/v). Addition of herbal growth promoter Orex in drinking water resulted in improvement of liveability percentage, production index, increase the number of lactobacilli and decrease the number of *E. coli* ($P < 0.05$). Herbal growth promoters used in this experiment (Orex and Bioherbal) boosted cellular and humoral immunity and decreased the ratio of heterophile to lymphocyte ($P < 0.05$). According to the obtained results, the utilization of herbal growth promoter Orex in drinking water (1:30 or 1:60, v/v) is recommended as an approach for improvement of production index, boosting immune system and increase liveability percentage of broiler chickens.

Keywords: broiler, herbal growth promoter, immune responses, intestinal microbial population